

REMARKS

Claims 4 to 8 are pending. Applicants respectfully request reconsideration of the present application in view of this response.

Claims 1 to 6 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,101,602 to Fridrich ("Fridrich reference") in view of U.S. Patent No. 6,504,941 to Wong ("Wong reference").

The Fridrich reference purportedly concerns a digital image that is authenticated by an embedded pattern created by hashing the image and adding a signature element. Abstract. The Fridrich reference further refers to manipulating the result by the seed for a random number generator leads to an initial two dimensional random black-and-white pattern; this pattern being manipulated by a cellular automaton and smoothed before being added to the original image. Abstract. The Fridrich reference further comments that to determine whether the image is authentic, one retrieves the watermark by subtracting the watermarked image from the original to obtain the difference, and the value of the correlation between the difference thus obtained and the smoothed pattern determines the presence or absence of the watermark. Abstract.

The Wong reference purportedly concerns a watermark insertion procedure which computes a hash function and then combines the output of the hashed function of a modified image block, a key and various image parameters with a block of the watermark bitmap, resulting in a combined image block. Abstract. The Wong reference refers, as a final step, to create a watermarked image block, the combined image block is inserted into the LSB of the modified image; the watermark extraction procedure taking the watermarked image block and creating two different image blocks: a first image block with the LSB's of the watermarked image block set to zero, and a second image block with the LSB's of the watermarked image block extracted. Abstract. The Wong reference further refers to the watermark extraction procedure as using the hash function to calculate a digest of values, resulting in a hashed output, the hashed output being combined with the second image block, preferably using an exclusive OR function, and the result of the combined hashed output with the second image block being a block of the extracted watermark. Abstract.

Claim 4 of the present application is directed to a method for generating a digital watermark for an electronic document, including determining a first hash value of the document, generating the watermark as a function of a proof of identity id and the first hash value of the document, providing a secret key for making the watermark visible, embedding the watermark in the document, restoring the document to an original state by removing the watermark using the secret key, determining a hash value of the restored document, and verifying ownership of the document by comparing the hash value of the restored document and the first hash value. Accordingly, the present invention allows a determination of the originator of the document by its method.

The Fridrich and Wong references, taken in combination or alone, do not teach or describe all of the features of the present application in the manner and method claimed. Specifically, the Fridrich and Wong references do not teach or describe a method in which a watermark is generated as a function of proof of identity and a first hash value, a secret key is provided for making the watermark visible, as claimed in claim 4. Those references do not provide such an invention. Accordingly, the rejection of claims 1 to 3 is moot in light of Applicants' earlier cancellation in its preliminary amendment. It is respectfully submitted that claims 4 to 6 are allowable and it is requested that the rejection of the claims 4 to 6 be withdrawn.

Claims 7 and 8 were rejected under 35 U.S.C. § 103(a) over the Fridrich and Wong references further in view of U.S. Patent No. 6,636,615 to Rhoads. Claims 7 and 8 depend from claim 4 and are thus allowable over the Fridrich and Wong references (even if combined) for at least the same reasons. The Rhoads reference purportedly concerns two or more digital watermarks, with different characteristics, embedded in a document, for which characteristics are chosen so that the watermarks will be affected in different manners if the document is subsequently copied or reproduced, involving a detection process or mechanism which reads two or more of the watermarks and compares their characteristics. Abstract. The Rhoads reference does not cure the deficiencies of the Fridrich and Wong references when taken in combination. Accordingly, Applicants respectfully submit that claims 7 and 8 are allowable, and it is requested that the rejection of claims 7 and 8 be withdrawn.

It is therefore respectfully submitted that claims 4 to 8 are allowable.

CONCLUSION

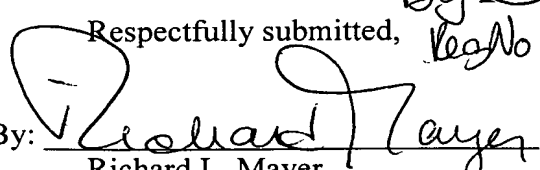
In view of the foregoing, it is believed that the rejections have been obviated, and that claims 4 to 8 are allowable. It is therefore respectfully requested that the rejections be withdrawn, and that the present application issue as early as possible.

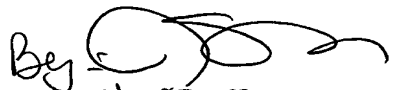
Should the Examiner wish to discuss this case, the Examiner is invited to contact the undersigned.

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Respectfully submitted,

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